

Serial No. 09/509,872
Art Unit 2616

RECEIVED
CENTRAL FAX CENTER

AMENDMENTS TO THE CLAIMS:

MAR 13 2007

Please replace the claims with the following set of claims, in which claims 1 and 8 have been amended:

1. (currently amended) A method of forwarding packets in a communication system having multiple incoming service interfaces and multiple output service interfaces for providing service to multiple distinct and isolated user networks, said method comprising:
 - maintaining multiple forwarding rules, said forwarding rules based on routing topology and policing information relevant to each of said distinct and isolated user networks;
 - receiving said packets at one of said incoming service interfaces;
 - selecting an appropriate forwarding rule based on a source address in said packets and on the incoming service interface from which the packets are received; and
 - forwarding said packets to one of said output service interfaces, the decision as to which output service interface to forward the packets to being based on a destination address in said packets and information in said selected forwarding rule.
2. (previously amended) The method as defined in claim 1 wherein said service interfaces support realms, each realm relating to a specific instance of an internetworking service function.
3. (previously amended) The method as defined in claim 2 wherein said specific instance is a public Internet access service.
4. (previously amended) The method as defined in claim 2 wherein said specific instance is a virtual private network (VPN) service.
5. (previously amended) The method as defined in claim 4 wherein said VPN service is a bridged and/or routed connectivity service.

Serial No. 09/509,872
Art Unit 2616

6. (previously amended) The method as defined in claim 4 wherein said VPN service is a network layer connectivity service.

7. (previously amended) The method as defined in claim 1 wherein said communication system includes an ATM transport fabric.

8. (currently amended) A packet forwarding entity for a communication system comprising:

a plurality of distinct and isolated user networks;
multiple service interfaces providing instances of service to one of said specific a plurality of distinct and isolated user networks;
multiple route servers for calculating multiple forwarding rules relating to instances of service to which said service interfaces belong based on routing, topology and policing information, the multiple forwarding rules being particular to their respective service interfaces; and

edge forwarders to direct said service interfaces to user networks based on information in said forwarding rules.

9. (previously cancelled)

10. (previously cancelled)

11. (previously amended) The packet forwarding entity as defined in claim 8 wherein said service interfaces related to physical and logical connections.

12. (previously amended) The packet forwarding entity as defined in claim 11 wherein said logical connections include multiple traffic flows from one or more ingress ports.

13. (previously amended) The packet forwarding entity as defined in claim 8 wherein one of said instances of service is an internetworking service function.

Serial No. 09/509,872
Art Unit 2616

14. (previously amended) The packet forwarding entity as defined in claim 13 wherein said internetworking service function is a Public Internet access service.

15. (previously amended) The packet forwarding entity as defined in claim 13 wherein said internetworking service function is a virtual private network (VPN) service.

16. (previously amended) The packet forwarding entity as defined in claim 15 wherein said VPN service is a bridged and/or routed connectivity service.

17. (previously amended) The packet forwarding entity as defined in claim 16 wherein said internetworking service function is provided over an ATM network.

18. (previously amended) The packet forwarding entity as defined in claim 16 wherein said internetworking service function supports multiple protocols.

19. (previously amended) The packet forwarding entity as defined in claim 18 wherein said internetworking service function provides services at both the packet and frame levels.

20. (previously amended) The packet forwarding entity as defined in claim 19 wherein said internetworking service function is managed by a single service provider.

21. (previously amended) The packet forwarding entity as defined in claim 18 wherein said multiple protocols include Multi-protocol over ATM (MPOA) service via a MPOA client lookup cache management function.

22. (previously cancelled)